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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/746,068	12/26/2000	Hisashige Ando	1614.1107	1994

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EXAMINER

PAN, DANIEL H

ART UNIT	PAPER NUMBER
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2183

DATE MAILED: 01/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/746,068

Applicant(s)

ANDO, HISASHIGE

Examiner

Daniel Pan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-16 is/are allowed.
- 6) ☒ Claim(s) 17-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

1. Claims 1-19 are presented for examination.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Helenius (4,395,758) in view of George Hoff (3,631,405) in view of Parkin (4,073,005).

3. As to claims 17,19, newly found art, Parkin, is used to show the teaching of the efficient execution of the given process. Helenius taught system that executes a specific process more frequently than other processes among a variety of processes said information-processing device comprising:

- a) corresponding to the variety of processes, Col. 2, lines 30-45 show a central a first processor configured to execute an entire instruction set processor or first processor for processing a number of instructions (an entire instruction set).
- b) a second processor configured to execute a portion or entirety of the same instruction set that the first processor executes, said second processor being capable of executing a part of said instruction set corresponding to the specific process more efficiently than

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said first processor', This section also shows that a special processor processes certain of those instructions (a portion of the same instruction set). This processor is the floating point accelerator mentioned in col. 12, lines 19-23 and column 13, lines 17-19 that processes these 'special instructions (floating point instructions) more efficiently, especially when extensive floating point instructions are used (the more frequently executed specific process as opposed to the other instructions).

c) wherein said second processor executes the specific process whereas said first processor executes the other processes (see the floating point process cited in d)).

4. As to claim 18, see the processor which was the floating point accelerator mentioned in col. 12, lines 19-23 and column 13, lines 17-19 that processes these special instructions (floating point instructions).

5. Helenius did not specifically disclose the execution of independent and separate processes by first and second processors as claimed. However, Hoff disclosed separate and independent processes executed by a first processor and sound processor (see program processed by p1 and program processed by p2 in fig.1 ) . It would have been obvious to one of ordinary skill in the art to use Hoff in Helenius for including the separate and independent processing as claimed because the use of Hoff could provide Helenius the ability to execute instructions by multiple processors at a predetermined time, and providing the processing bandwidth, and because Helenius disclosed the execution of repeated instructions which required significant periods of time (col.2, lines

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24-30), which was a suggestion of the need of providing multiple processors to process instructions independently in order to reduce the extra cycle caused by the repeated instructions, and for the above reasons, provided a motivation.

6. Neither Helenius nor George Hoff specifically show the second processor passed a given process ( or the instruction) to the first processor when the instruction cannot be efficiently executed by the second processor in the given process as claimed. However, Parkin disclosed a system for allocating a process to a plurality of processors which had the capability to execute the process most efficiently (see col.2, lines 58-65, see the plurality of processors in col.3, lines 35-55 ). From the above teaching, it can be seen that Parkin was able to assign a processor which could execute a given process (task) most efficiently , and therefore, more efficiently than other processors. Since the processor could execute the process (task) most efficiently, the other processor(s) (second processor) could not execute the process more efficiently than the assigned processor (first processor) . It would have been obvious to one of ordinary skill in the art to use Parkin in Helenius for passing a given process to a first processor when the instruction cannot be efficiently executed by the second processor as claimed because the use of Parkin could provide Helenius the ability to relieve and switch the workload of a processor to another processor which was able to process the task more efficiently, and minimizing the idle cycle of the second processor, and therefore, increasing the efficiency of the overall cycle time, and because Helenius did disclose the execution of floating point instructions which had the more frequently executed specific process as opposed to the other instructions , as

would have been recognized by one of ordinary skill in the art, and therefore, the suggestion of passing the process (e.g. task, instruction, etc) to more efficient processor, and in doing so, provided a motivation.

7. Claims 1,9 are allowable over the art of record for reciting the detailed combined features of, for example, first processor having single program counter, the second processor having plurality of counters for executing processes simultaneously, and the series of instructions by the first processor separate and independent from the series of instructions executed by the second processor. Helenius showed processors corresponding to the variety of processes (Col. 2, lines 30-45). Hoff disclosed separate and independent processes (see program processed by p1 and program processed by p2 in fig.1). However, neither Helenius nor Hoff disclosed the first processor including a single program counter and the second processor including plurality of program counters, nor the combined features as set forth in claims 1 and 9.

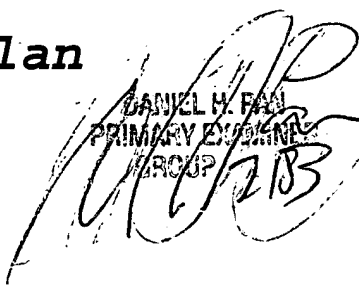
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dan Pan whose telephone number is 703 305 9696, or the new number 571 272 4172. The examiner can normally be reached on M-F from 8:30 AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chan, can be reached on 703 305 9712, or the new number 571 272 4162. The fax phone number for the organization where this application or proceeding is assigned is 703 306 5404.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

***21 Century Strategic Plan***

  
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PRIMARY EXAMINER  
GROUP 2183